

REPORT DOCUMENTATION PAGE

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1. REPORT DATE (DD-MM-YYYY)

2. REPORT TYPE
Technical Papers

3. DATES COVERED (From - To)

4. TITLE AND SUBTITLE

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5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

5d. PROJECT NUMBER
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5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Air Force Research Laboratory (AFMC)
AFRL/PRS
5 Pollux Drive
Edwards AFB CA 93524-7048

8. PERFORMING ORGANIZATION
REPORT

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Air Force Research Laboratory (AFMC)
AFRL/PRS
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10. SPONSOR/MONITOR'S
ACRONYM(S)

11. SPONSOR/MONITOR'S
NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for public release; distribution unlimited.

13. SUPPLEMENTARY NOTES

14. ABSTRACT

1121 011

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:

17. LIMITATION
OF ABSTRACT

18. NUMBER
OF PAGES

19a. NAME OF RESPONSIBLE
PERSON

a. REPORT

b. ABSTRACT

c. THIS PAGE

Unclassified

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A

Leilani Richardson

19b. TELEPHONE NUMBER

(include area code)

(661) 275-5015

Standard Form 298 (Rev. 8-98)
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62

semirate items are enclosed

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MEMORANDUM FOR PRS (Contractor/In-House Publication)

FROM: PROI (TI) (STINFO)

26 September 2000

SUBJECT: Authorization for Release of Technical Information, Control Number: **AFRL-PR-ED-AB-2000-182**
Vij, Vandana; Vij, Ashwani (USC); Wilson, W.; Christe, K.O. (ERC); "Recent Progress in Nitrogen
Fluoride Chemistry"

15th Winter Fluorine Conference (St. Petersburg, FL, 14 Jan 2001)
(Past Deadline: 14 Sep 2000)

(Statement A)

1. This request has been reviewed by the Foreign Disclosure Office for: a.) appropriateness of distribution statement, b.) military/national critical technology, c.) export controls or distribution restrictions, d.) appropriateness for release to a foreign nation, and e.) technical sensitivity and/or economic sensitivity.

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Comments: _____

APPROVED/APPROVED AS AMENDED/DISAPPROVED

PHILIP A. KESSEL Date
Technical Advisor
Propulsion Science and Advanced Concepts Division

Cleared (PA) _____
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RECENT PROGRESS IN NITROGEN FLUORIDE CHEMISTRY. **Vandana Vij**, Ashwani Vij, William W. Wilson, Karl O. Christe, Air Force Research Laboratory, Edwards AFB, CA 93524 and University of Southern California, Los Angeles, CA 90089.

For the preparation of N_5^+ salts on a larger scale, it was necessary to prepare the corresponding precursors in an efficient manner and in large quantities. In this paper, process improvements in this direction are described. Furthermore, the catalytic conversion of trans- N_2F_2 to its cis-isomer is discussed. Also discovered during the isomerization studies was a novel synthetic route to NF_4^+ salts at relatively low temperature and pressure. A structural analysis of the N_2F^+ cation was also carried out for $N_2F^+SbF_6^-$ and $N_2F^+Sb_2F_{11}^-$.

ABSTRACT. Please be BRIEF—150 words maximum if possible. Title of paper should be ALL CAPS; author(s) listed by first name, middle initial, last name; indicate address with zip code.

A. DIVISION OF FLUO Division Member ☒ Yes ☐ No

B. ACS MEMBER ☒ Yes ☐ No

C. TITLE OF PAPER Method for solving some disordered crystal structures and its application to the structures of NF_2O^+ and SO_2F^-

Please indicate preference: ☒ Oral ☐ Poster
☐ withdraw if oral/poster format cannot be met

D. AUTHORS

Principal Author:
Last Name

First Name

MI

Vij Vandana

Presenting Author (if different):

Co-authors:

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Wilson

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Christe

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(To be filled in by Division)

Paper number as listed on program _____

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G. For contributed papers, do authors meet criteria outline in ACS Bylaw VI, Section 6(3)? See instructions.

☐ Yes ☐ No

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